

NUCLEAR FALLOUT

Several scientists have been targeted for assassination in Iran over the past two years, although some have no verifiable connection to the country's nuclear programme.



Masoud Alimohammadi
Particle physicist at the University of Tehran, no link to nuclear programme.
Killed 12 January 2010



Fereydoun Abbasi-Davani
Senior nuclear scientist at defence ministry, now head of nuclear programme.
Injured 29 November 2010



Majid Shahriari
Nuclear physicist, possibly involved in nuclear programme.
Killed 29 November 2010



Dariush Rezaei-Nejad
Electrical-engineering student, no link to nuclear programme.
Killed 23 July 2011



Mostafa Ahmadi Roshan Behdast
Deputy director of marketing at Natanz uranium facility.
Killed 11 January 2012

NUCLEAR POLITICS

Murders unlikely to slow Iran's nuclear efforts

Experts say international sanctions are the best way to stall the weapons programme.

BY SHARON WEINBERGER IN BEIRUT

Last week's assassination of an official working at Iran's uranium-enrichment facility was worthy of a James Bond film: the 32-year-old was killed by a magnetic bomb placed on his car by a passing motorcyclist.

But the murder of Mostafa Ahmadi Roshan Behdast is unlikely to result in a neat filmic denouement. His death is the latest in a string of assassinations and other attacks seemingly aimed at Iran's nuclear programme over the past few years (see 'Nuclear fallout').

Although experts agree that at least some of the killings are part of an organized foreign campaign to slow Iran's efforts to enrich uranium, they are sceptical that the strategy will work. "The immediate effect is very small," says Olli Heinonen, a senior fellow at Harvard University's Belfer Center for Science and International Affairs in Cambridge, Massachusetts. "If I have a project that is important for national security, I never count on one single person," he says, suggesting that international sanctions are a more effective way of slowing Iran's efforts.

Heinonen, former deputy director-general of the International Atomic Energy Agency in Vienna, points out that there is still no proof of who ordered the assassination, or why. Ahmadi Roshan was named in many Western press reports as a nuclear scientist (his degree was actually in chemical engineering), but the

Iranian press identified him as deputy director of marketing at the uranium-enrichment facility in Natanz, suggesting that he was not a crucial figure in Iran's nuclear programme.

Peter Zimmerman, a physicist and emeritus professor at King's College London, says that killing key personnel could delay a nuclear programme in the right circumstances. For example, killing Leslie Groves, the military chief of the Manhattan Project during the Second World War, might have had serious consequences if it had happened in 1942 or 1943 when the atomic-bomb project was in doubt and Groves' advocacy was crucial. But "if I had killed [J. Robert] Oppenheimer in 1944, I don't think it would have delayed Hiroshima by even a month, and maybe not a week", suggests Zimmerman. In Iran, he says, none of the victims so far is crucial to the nuclear programme.

Even identifying key personnel in the programme can be difficult, because scientists suspected of involvement often have academic affiliations. In an interview in 2007 with this reporter, Fereydoun Abbasi-Davani introduced himself as a university professor and head of the Nuclear Society of Iran, an academic association for promoting nuclear knowledge. But he was also on a United Nations sanctions list for his alleged involvement in Iran's clandestine military programme. In 2010, an attempt to assassinate Abbasi-Davani failed, and he was subsequently

appointed as the head of Iran's Atomic Energy Organization in Tehran.

At the time, Abbasi-Davani described efforts to slow Iran's nuclear programme as "fruitless", and resulting in only short-term setbacks. For example, he said, the United States allegedly led a ban on selling software to Iran that could be used for calculating nuclear reactions. Abbasi-Davani said that Iranian scientists eventually developed their own software, in part using information from contacts abroad. "We were slowed down, but we could get the knowledge and know-how that we needed in other ways," he said.

A similar recovery was seen after the Stuxnet computer worm wreaked havoc with the uranium-enrichment centrifuges at Natanz in 2010, says Scott Kemp, an associate research scholar at Princeton University's Woodrow Wilson School for Public and International Affairs in New Jersey. "They overcompensated, they began enriching even faster, and within six weeks, they were caught up," he says. Soon, he adds, the facility had moved even closer to being able to produce enough highly enriched uranium for a nuclear weapon.

Kemp suggests that killing scientists who are allegedly associated with the programme could have the same effect, by bolstering Iran's resolve to develop its nuclear capability. "These things have unintended and unforeseeable consequences," he notes. ■